DAMPING SOUND INSULATING PANEL

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Abstract of **JP10266388**

PROBLEM TO BE SOLVED: To form a damping sound insulating panel having high damping sound insulating property with lightweight by fluidally sealing inorganic powder in a hollow panel inside space, and converting vibration energy of powder particles into thermal energy. SOLUTION: A partition plate 11 composed of aluminum honeycomb material exists between aluminum surface materials 10, 10 to form a hollow panel, and powder 2 is fluidally sealed in the hollow part to form a damping sound insulating panel. The powder 2 preferably has an inside space or minute holes, made an inorganic system such as glass beads, a silica balloon, vermiculite and perlite, an acrylic sphere can be also used, a particle diameter is made 30-1000 &mu m, exciting acceleration is in the neighborhood of 1G, and a fluidal phenomenon produced in the powder 2 is effectively utilized to convert vibration energy of the particles of the powder 2 into thermal energy. Thus, when the damping sound insulating panel is used for floor material, wall material and ceiling material of a shinkansen vehicle, a noise level can be reduced in a wide frequency band.